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Type I Diabetes – Metabolic Disfunction and Changes Induced by Sars-Cov 2 Infection

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Abstract *Diabetes mellitus is a chronic metabolic disease characterized by a deficiency in insulin production and its action or both which leads to prolonged hyperglycaemia with disturbances in most metabolic processes inside the human body. In the case of infection with the new coronavirus SARS-COV-2 (COVID19) these patients have a higher risk of having a severe prognosis. Some studies suggest that diabetes may increase the risk of infection by two to three times, regardless of the presence of other conditions. The role of ferritin in correlation with the severity of COVID-19 patients is unknown. Research hypothesis. The level of blood ferritin. Serum ferritin levels appear to correlate with the severity of COVID-19 patients, which may make them a candidate for the role of biomarker. In this paper I want to show whether ferritin can be a marker of poor prognosis in patients with type I diabetes infected with SARS-COV 2 virus.*

Key words: Diabetes mellitus, Insulin, COVID-19, Ferritin.

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Introduction

The new coronavirus disease (COVID-19) has affected more than 100 million people and caused more than 2 million deaths worldwide. The disease has a poor prognosis, particularly in patients with diabetes. Diabetes mellitus is associated with severe disease, intensive care unit admissions and increased mortality in patients with COVID-19 (Pal, 2020, Huang et al. 2020).

Diabetes is a chronic metabolic disease affecting hundreds of millions of people worldwide, with damaging micro- and macro-vascular effects that are associated with a human and socio-economic burden. For these reasons, diabetes is a global public health problem (Eeg-Olofsson, 2010).

Worldwide, the prevalence of diabetes is increasing. While in 2000 the number of diabetics was 171 million, estimates in 2015 put the number at 415 million, and